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“No bag – no fill”

HDG BAGGER PROVIDES FLEXIBILITY FOR SWISS FOOD MANUFACTURER Cocoa powder, pecans, and soy beans from Central and South America, mangos and dried apricots from South Africa, bay leaves and sultanas from the Middle East, morels and curry powder from Asia – Sunraya, a Swiss company, processes high-quality, exotic raw materials from all over the world. At company headquarters in Pratteln, Switzerland, right outside Basel on the River Rhine, about 100 tonnes of raw materials flow through state-of-the-art production equipment. For 18 months, the company's equipment has also included a bag filling and sealing machine from HDG Verpackungsmaschinen in Kürten, Germany.

The horizontal form-fill-seal machine in a duplex arrangement (Model RBG-2) is used at Sunray for packaging baking powder, spices, pudding mixes, flavorings, but also for chocolate squares and poppy seeds. Two thirds of the approximately 50 different products come in powdery form, placing high demands on the machine. And flexibility is critical, says project lead Dominik Leder, “We



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also process coarse-grained products, all the way up to whole nutmegs.”

The machine offers the right bag for each product: 3- and 4-side seal bags, stand-up bags as well as folded-bottom bags in format widths from 65 mm to a max. of 125 mm. “We can run small 13 gram bags on the duplex machine without any problem just as well as 200 gram bags,” says Markus Ertl from Sunray's Technical Service. “And the bags can also be provided with Euro-perforation or a zipper, thanks to the comprehensive features of the machine.” As a division of Coop, Sunray is producing exclusively for the Swiss market today, resulting in sales of CHF 207 million last year. “Our market is relatively small; consequently, we have to be very flexible. And thanks to the HDG machine, we are,” says Dominik Leder. Fast format changes, as well as change-overs between re-closable flat and stand-up bags do not cause any problems. Depending on product and bag form, the RBG-2 can handle up to 180 bags/min. “We are running the HDG machine at 20 to 90 cycles per minute,” explains Markus Ertl. “Some prod-



Horizontal form, fill and seal machine with rotary Model HDG-RB: 3- and 4-side seal bags, stand-up bags, as well as folded-bottom bags can all be filled on this machine.

Photos: HDG

ucts, such as pudding mixes, are run for two to three weeks. But that includes many different varieties in sequence. For spices, we process much smaller lots of only 5,000 to 10,000 bags. At those times, we may have to change formats three times a day,” says Ertl.

Simultaneous packaging of different products

The deciding factors for the Swiss company to go with a system from HDG were its high degree of flexibility and the machine's modular design. Leder explains, “For us, the advantages were mostly in the modular design concept of the machine. Other manufacturers have also started offering this recently, but we'd rather put our trust in a company that has already gathered experience with this concept. And HDG has completely met our expectations.” The RBG-2 comes equipped with a pneumatic reel tensioning shaft. If the film reels have to be changed without stopping the machine, an optional film reel splicer can be installed. The system is designed as an 8-station rotary machine. The smooth precision surfaces of the bag clamps provide high, uniform surface pressure, thus preventing the film from being mechanically damaged. First, the bags are aspirated and opened mechanically. The opening process is supported by blowing filtered, compressed air into the bags. Then, two vertically actuated bag shapers ensure optimal bag shape by moving into the bag. A bag shape control unit monitors whether both bags are present and opened properly, and controls the “no bag – no fill” function, if necessary. Filling is then effected at stations 4 and 5, and, if

necessary, at station 6, which can have an optional mechanical bag deflater. Sunray doses all powdery products using an auger filler, which comes from the predecessor machine (which has meanwhile been decommissioned) and has been integrated into the HDG machine. It had its own control unit and is not controlled via the form-fill-seal machine. An additional cup weigher was installed for filling granular products. Both dosing systems can also be used simultaneously. “This would allow us to fill powdery products and products in pieces into the same packaging together, but we haven't used that function yet,” says Leder. After the dosing process, the packaging material surfaces that are to be sealed are placed against each other parallel and tauged to ensure a flawless top seal. Thermal top sealing is standard, but ultrasound sealing is also available as an option. “We are very pleased with how the entire project went, and also with their service,” says Dominik Leder. “We were able to give input from our experiences already during the planning stage. That was important, since we process critical products. And our needs with regard to the machine features were then implemented very well.” db ■



HDG Verpackungs-
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HDG-Verpackungsmaschinen

This privately held company has been manufacturing horizontal and vertical form-fill-seal machines in a small town about 20 miles from Cologne, Germany for almost 40 years. Leading manufacturers such as Nestlé, Dr. Oetker, Unilever, Hengstenberg, Wrigley's, Fuchs Gewürze or Procter&Gamble are working with packaging machines from HDG today. Currently, the company has 45 employees and 2006 sales were, according to management, Euro 7.5 million. Last year, the company supplied almost 20 form-fill-seal machines. ■